

IFW



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Case No. 99-383-B1)

PATENT

In re Application of:	)	
	)	
John W. Belmont et al.	)	Examiner: Unassigned
	)	
Serial No.: 10/803,738	)	
	)	Group Art Unit: 1651
Filing Date: March 18, 2004	)	
	)	
For: Phosphatases Which Activate Map	)	Confirmation No.: 8046
Kinase Pathways	)	

TRANSMITTAL LETTER

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313

Sir:

In regard to the above identified application.  
We are transmitting herewith the attached:

- a) Letter
- b) U.S. PTO 1449 Form with a copy of 2 references
- c) Return Receipt Postcard

2. With respect to fees:

- a) No payment is enclosed.
- b) General Authorization: Please charge any underpayment or credit any overpayment our Deposit Account No. 13-2490.

3. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 12 day of October, 2005.

Respectfully submitted,

Date: Oct. 12, 2005

Emily Miao  
Registration No. 35,285



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Case No. 99-383-B1)

In re Application of:

John W. Belmont et al.

Serial No.: 10/803,738

Filing Date: March 18, 2004

For: Phosphatases Which Activate Map  
Kinase Pathways

)  
)  
) Examiner: Unassigned  
)  
)  
) Group Art Unit: 1651  
)  
)  
) Confirmation No.: 8046  
)

LETTER

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Further to the Supplemental Information Disclosure Statement filed on October 6, 2005, we enclose copies of Ref. nos. 39 (Guerrero et al., *Oncogene*, vol. 16, pp. 613-624 (1998)) and 71 (Martín-Blanco, *Int. J. Dev. Biol.*, Vol. 42, pp. 363-368 (1998)). These two references were not available when the Statement was filed. A copy of the PTO 1449 is attached. The Examiner is requested to execute the attached PTO 1449 and return a copy to the undersigned representative.

Prompt consideration and entry of this Letter and revised PTO 1449 is respectfully requested.

Respectfully submitted,

Dated: Oct. 12, 2005

Emily Miao  
Registration No. 35,285

McDonnell Boehnen Hulbert & Berghoff LLP  
300 South Wacker Drive  
Chicago, Illinois 60606  
Telephone: (312) 913-0001  
Facsimile: (312) 913-0002

FORM PTO-1449  
(Rev. 2-32)U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

99,383-B1

Serial No.

10/803,738

SUPPLEMENTAL INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several sheets if necessary)

Applicant:

John W. Belmont et al.

Filing Date:

March 18, 2004

Group:

8046

## U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate

## FOREIGN PATENT DOCUMENTS

Document Number	Date	Country	Class	Subclass	Translation Yes No

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

1.	Anafi M, et al., "SH2/SH3 adaptor proteins can link tyrosine kinases to a Ste20-related protein kinase, HPK1," <i>J Biol. Chem.</i> , Vol. 272, pp. 27804, 1997, U.S.
2.	Andersson MB, et al., "Differential regulation of parallel mitogen-activated protein kinases in cardiac myocytes revealed by phosphatase inhibition," <i>Biochem. Biophys. Res. Commun.</i> , Vol. 251:328, 1998, U.S.
3.	Aspenstrom P, et al., "Two GTPases, Cdc42 and Rac, bind directly to a protein implicated in the immunodeficiency disorder Wiskott-Aldrich syndrome," <i>Curr. Biol.</i> , Vol. 6, pp.70-75, 1996, U.S.
4.	Avraham A, et al., "Co-stimulation-dependent activation of a JNK-kinase in T lymphocytes," <i>Eur. J. Immunol.</i> , Vol. 28, pp. 2320-2330, 1998

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449  
(Rev. 2-32)U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

99,383-B1

Serial No.

10/803,738

SUPPLEMENTAL INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several sheets if necessary)

Applicant:

John W. Belmont et al.

Filing Date:

March 18, 2004

Group:

8046

5.	Beltman J, et al., "The selective protein kinase C inhibitor, Ro-31-8220, inhibits mitogen- activated protein kinase phosphatase- 1 (MKP-1) expression, includes c- Jun expression, and activates Jun N-terminal kinase," <i>J. Biol. Chem.</i> , Vol. 271, pp. 27018-27024, 1996, U.S.
6.	Ben-Levy R, et al., "Nuclear export of the stress-activated protein kinase p38 mediated by its substrate MAPKAP kinase-2," <i>Curr. Biol.</i> , Vol. 8, No. 19, pp. 1049-1057, 1998
7.	Burgess GS, et al., "Regulation of the c-jun gene in p210 BCR-ABL transformed cells corresponds with activity of JNK, the c-jun N-terminal kinase," <i>Blood</i> , Vol. 92, pp. 2450-2460, 1998, U.S.
8.	Camps M, et al., "Catalytic activation of the phosphatase MKP-3 by ERK2 mitogen-activated protein kinase," <i>Science</i> , Vol. 280, pp. 1262-1265, 1998, U.S.
9.	Cavigelli M, et al., "The tumor promoter arsenite stimulates AP-1 activity by inhibiting a JNK phosphatase," <i>EMBO J.</i> , Vol. 15, No. 22, pp. 6269-6279, 1996
10.	Ceresa BP, et al., "Signal transducer and activator of transcription-3 serine phosphorylation by insulin is mediated by a Ras/Raf/MEK-dependent pathway," <i>Endocrinology</i> , Vol. 138, pp. 4131-4137, 1997, U.S.
11.	Chen YR, "The role of c-Jun N-terminal kinase (JNK) in apoptosis induced by ultraviolet C and gamma radiation. Duration of JNK activation may determine cell death and proliferation," <i>J. Biol. Chem.</i> , Vol. 271, pp. 31929-31936, 1996, U.S.
12.	Chow CW, et al., "Nuclear accumulation of NFAT4 opposed by the JNK signal transduction pathway," <i>Science</i> , Vol. 278, pp. 1638-1641, 1997, U.S.
13.	Chu Y, et al., "The mitogen-activated protein kinase phosphatases PAC1, MKP-1, and MKP- 2 have unique substrate specificities and reduced activity in vivo toward the ERK2 sevenmaker mutation," <i>J. Biol. Chem.</i> , Vol. 271, pp. 6497-6501, 1996, U.S.
14.	Cortez D., et al., "The Bcr-Abl tyrosine kinase activates mitogenic signaling pathways and stimulates G1-to-S phase transition in hematopoietic cells," <i>Oncogene</i> , Vol. 15, pp. 2333-2342, 1997
15.	Cuenda A, et al., "Purification and cDNA cloning of SAPKK3, the major activator of RK/p38 in stress- and cytokine-stimulated monocytes and epithelial cells," <i>EMBO J.</i> , Vol. 15, pp. 4156-4164, 1996, U.S.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449  
(Rev. 2-32)U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

99,383-B1

Serial No.

10/803,738

SUPPLEMENTAL INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several sheets if necessary)

Applicant:

John W. Belmont et al.

Filing Date:

March 18, 2004

Group:


8046

16.	Cuenda A, et al., "Activation of stress-activated protein kinase-3 (SAPK3) by cytokines and cellular stresses is mediated via SAPKK3 (MKK6); comparison of the specificities of SAPK3 and SAPK2 (RK/p38)," <i>EMBO J.</i> , Vol. 16, pp. 295-305, 1997, U.S.
17.	Cuenda A, et al., "Activation of the novel MAP kinase homologue SAPK4 by cytokines and cellular stresses is mediated by SKK3 (MKK6)," <i>Biochem. Soc. Trans.</i> , Vol. 25, pp. S569, 1997
18.	Cuenda A, et al., "Differential activation of stress-activated protein kinase kinases SKK4/MKK7 and SKK1/MKK4 by the mixed-lineage kinase-2 and mitogen- activated protein kinase kinase (MKK) kinase- 1," <i>Biochem. J.</i> , Vol. 333, pp. 11-15, 1998, Great Britain
19.	Diener K, et al., "Activation of the c-Jun N-terminal kinase pathway by a novel protein kinase related to human germinal center kinase," <i>Proc. Natl. Acad. Sci.</i> , Vol. 94, pp. 9687-9692, 1997, U.S.
20.	Dolfi F, et al., "The adaptor protein crk connects multiple cellular stimuli to the JNK signaling pathway," <i>Proc. Natl. Acad. Sci.</i> , Vol. 95, pp. 15394-15399, 1998, U.S.
21.	Dowd S, et al., "Isolation of the human genes encoding the Pyst1 and Pyst2 phosphatases: characterisation of Psyst2 as a cytosolic dual-specificity MAP kinase phosphatase and its catalytic activation by both MAP and SAP kinases," <i>J. Cell. Sci.</i> , Vol. 111, pp. 3389-3399, 1998, Great Britain
22.	Durham PL, et al., "Serotonergic repression of mitogen-activated protein kinase control of the calcitonin gene-related peptide enhancer," <i>Mol. Endocrinol.</i> , Vol. 12, pp. 1002-1009, 1998, U.S.
23.	Enslen H, et al., "Selective activation of p38 mitogen-activated protein (MAP) kinase isoforms by the MAP kinase kinases MKK3 and MKK6," <i>J. Biol. Chem.</i> , Vol. 273, pp. 1741-1748, 1998, U.S.
24.	Enslen H, et al., "Regulation of mitogen-activated protein kinases by a calcium/calmodulin- dependent protein kinase cascade," <i>Proc. Natl. Acad. Sci.</i> , Vol. 93, pp. 10803-10808, 1996, U.S.
25.	Fanger GR, et al., "MEK kinases are regulated by EGF and selectively interact with Rac/Cdc42," <i>EMBO J.</i> , Vol. 16, pp. 4961-4972, 1997
26.	Finch A, et al., "Selective activation of JNK/SAPK by interleukin-1 in rabbit liver is mediated by MKK7," <i>FEBS Lett.</i> , Vol. 418, pp. 144, 1997

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32)		U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No.  99,383-B1	Serial No.  10/803,738
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Applicant:  John W. Belmont et al.	
(Use several sheets if necessary)				

27.	Fischer KD, et al., "Vav is a regulator of cytoskeletal reorganization mediated by the T- cell receptor," <i>Curr. Biol.</i> , Vol. 8, pp. 554-562, 1998
28.	Foltz IN, et al., "Human mitogen-activated protein kinase kinase 7 (MKK7) is a highly conserved c-Jun N-terminal kinase/stress activated protein kinase (JNK/SAPK) activated by environmental stresses and physiological stimuli," <i>J. Biol. Chem.</i> , Vol. 273, pp. 9344-9351, 1998, U.S.
29.	Foltz IN, et al., "Activation of the stress-activated protein kinases by multiple hematopoietic growth factors with the exception of interleukin-4," <i>Blood</i> , Vol. 89, pp. 3092-3096, 1997, U.S.
30.	Franklin CC, et al., "Conditional expression of the mitogen-activated protein kinase (MAPK) phosphatase MKP-1 preferentially inhibits p38 MAPK and stress-activated protein kinase in U937 cells," <i>J. Biol. Chem.</i> , Vol. 272, pp. 16917-16923, 1997, U.S.
31.	Franklin CC, et al., "Conditional expression of mitogen-activated protein kinase phosphatase-1, MKP-1, is cytoprotective against UV-induced apoptosis," <i>Proc. Natl. Acad. Sci.</i> , Vol. 95, pp. 3014-3019, 1998, U.S.
32.	Fuchs SY, et al., "JNK targets p53 ubiquitination and degradation in nonstressed cells," <i>Genes. Dev.</i> , Vol. 12, pp. 2658-2663, 1998, U.S.
33.	Goedert M, et al., "Activation of the novel stress-activated protein kinase SAPK4 by cytokines and cellular stresses is mediated by SKK3 (MKKK6); comparison of its substrate specificity with that of other SAP kinases," <i>EMBO J.</i> , Vol. 16, pp. 3563-3571, 1997, U.S.
34.	Graves JD, et al., "Caspase-mediated activation and induction of apoptosis by the mammalian Ste20-like kinase Mst1," <i>EMBO J.</i> , Vol. 17, pp. 2224-2234, 1998, U.S.
35.	Groom LA, et al., "Differential regulation of the MAP, SAP and RK/p38 kinases by Pyst1, a novel cytosolic dual-specificity phosphatase," <i>EMBO J.</i> , Vol. 15, pp. 3621-3632, 1996, U.S.
36.	Gu J, et al., "Tumor suppressor PTEN inhibits integrin- and growth factor-mediated mitogen-activated protein (MAP) kinase signaling pathways," <i>J. Cell. Biol.</i> , Vol. 143, pp. 1375-1383, 1998, U.S.
37.	Guan Z, et al., "Induction of cyclooxygenase-2 by the activated MEKK1 [ ] SEK1/MKK4 [ ] p38 mitogen-activated protein kinase pathway," <i>J. Biol. Chem.</i> , Vol. 273, pp. 12901-12908, 1998, U.S.

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No.  99,383-B1	Serial No.  10/803,738
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)		Applicant:  John W. Belmont et al.	
		Filing Date:  March 18, 2004	Group:  8046

	38.	Guan Z, et al., "Interleukin- 1beta-induced cyclooxygenase-2 expression requires activation of both c-Jun NH2-terminal kinase and p38 MAPK signal pathways in rat renal mesangial cells," <i>J. Biol. Chem.</i> , Vol. 273, pp. 28670-28676, 1998, U.S.
	39.	Guerrero C, et al., "Transformation suppressor activity of C3G is independent of its CDC25- homology domain," <i>Oncogene</i> , Vol. 16, pp. 61, 1998
	40.	Guo YL, et al., "Correlation between sustained c-Jun N-terminal protein kinase activation and apoptosis induced by tumor necrosis factor-alpha in rat mesangial cells," <i>J. Biol. Chem.</i> , Vol. 273, pp. 4027-4034, 1998, U.S.
	41.	Gupta S, et al., "Selective interaction of JNK protein kinase isoforms with transcription factors," <i>EMBO J.</i> , Vol. 15, pp. 2760-2770, 1996, U.S.
	42.	Han J, et al., "Characterization of the structure and function of a novel MAP kinase kinase (MKK6)," <i>J. Biol. Chem.</i> , Vol. 271, pp. 2886-2891, 1996
	43.	Hanada M. , et al., "Selective suppression of stress-activated protein kinase pathway by protein phosphatase 2C in mammalian cells," <i>FEBS Lett.</i> Vol. 437, pp. 172-176, 1998, Great Britain
	44.	Hazzalin CA, et al., "p38/RK is essential for stress-induced nuclear responses: JNK/SAPKs and c-Jun/ATF-2 phosphorylation are insufficient," <i>Curr. Biol.</i> , Vol. 6, pp. 1028-1031, 1996
	45.	Hazzalin CA, et al., "Effects of the inhibition of p38/RK MAP kinase on induction of five fos and jun genes by diverse stimuli," <i>Oncogene</i> , Vol. 15, pp. 2321-2331, 1997, U.S.
	46.	Healy JI, et al., "Different nuclear signals are activated by the B cell receptor during positive versus negative signaling," <i>Immunity</i> , Vol. 6, pp. 419-428, 1997, U.S.
	47.	Heidenreich KA, et al., "Inhibition of p38 mitogen-activated by insulin in cultured fetal neurons," <i>J. Biol. Chem.</i> , Vol. 271, pp. 9891-9894, 1996, U.S.
	48.	Hirai S, et al., "Differential activation of two JNK activators, MKK7 and SEK1, by MKN28- derived nonreceptor serine/threonine kinase/mixed lineage kinase 2," <i>J. Biol. Chem.</i> , Vol. 273, pp. 7406-7412, 1998, U.S.

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<b>FORM PTO-1449</b> (Rev. 2-32)	<b>U.S. Department of Commerce</b> <b>Patent and Trademark Office</b>	<b>Atty. Docket No.</b> 99,383-B1	<b>Serial No.</b> 10/803,738
<b>SUPPLEMENTAL INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)		<b>Applicant:</b> John W. Belmont et al.	
		<b>Filing Date:</b> March 18, 2004	<b>Group:</b> 8046

49.	Hirsch DD, Stork PJ: mitogen-activated protein kinase phosphatases inactivate stress-activated protein kinase pathways in vivo. <i>J Biol Chem</i> 272:4568, 1997
50.	Holland PM, et al., "MKK7 is A stress-activated mitogen-activated protein kinase kinase functionally related to hemipterous," <i>J. Biol. Chem.</i> Vol. 272, pp. 24994-24998, 1997, U.S.
51.	Howe AK, et al., "Cell cycle progression in monkey cells expressing simian virus 40 small t antigen from adenovirus vectors," <i>J. Virol.</i> Vol. 72, pp. 9637, 1998
52.	Hu MC, et al., "Human HPK1, a novel human hematopoietic progenitor kinase that activates the JNK/SAPK kinase cascade," <i>Genes. Dev.</i> , Vol. 10, pp. 2251, 1996
53.	Ichijo H, et al., "Induction of apoptosis by ASK1, a mammalian MAPKKK that activates SAPK/JNK and p38 signaling pathways," <i>Science</i> , Vol. 275, pp. 90, 1997
54.	Janknecht R, et al., "Convergence of MAP kinase pathways on the ternary complex factor Sap- 1a," <i>EMBO J.</i> , Vol. 16, pp. 1620, 1997
55.	Jiang Y, et al., "Characterization of the structure and function of a new mitogen-activated protein kinase (p38beta)," <i>J. Biol. Chem.</i> , Vol. 271, pp. 17920, 1996
56.	Jiang Y, et al., "Characterization of the structure and function of the fourth member of p38 group mitogen-activated protein kinases, p38δ," <i>J. Biol. Chem.</i> , Vol. 272, pp. 30122, 1997
57.	Kallunki T, et al., "c-Jun can recruit JNK to phosphorylate dimerization partners via specific docking interactions," <i>Cell</i> , Vol. 87, pp. 929, 1996
58.	Kao AW, et al., "Insulin stimulates the phosphorylation of the 66- and 52-kilodalton Shc isoforms by distinct pathways," <i>Endocrinology</i> , Vol. 138, pp. 2474, 1997
59.	Kawakami Y, et al., "Multiple signaling pathways for the activation of JNK in mast cells: involvement of Bruton's tyrosine kinase, protein kinase C, and JNK kinases, SEK1 and MKK7 <sup>1</sup> ," <i>J. Immunol.</i> , Vol. 161, pp. 1795, 1998
60.	Keesler GA, et al., "Purification and activation of recombinant p38 isoforms α, β, γ, and δ," <i>Protein Expr. Purif.</i> , Vol. 14, pp. 221, 1998

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.



<b>FORM PTO-1449</b> <b>(Rev. 2-32)</b>	<b>U.S. Department of Commerce</b> <b>Patent and Trademark Office</b>	<b>Atty. Docket No.</b> 99,383-B1	<b>Serial No.</b> 10/803,738
<p align="center"> <b>SUPPLEMENTAL INFORMATION DISCLOSURE</b>  <b>STATEMENT BY APPLICANT</b>            (Use several sheets if necessary)       </p>		<b>Applicant:</b> John W. Belmont et al.	
		<b>Filing Date:</b> March 18, 2004	<b>Group:</b> 8046

61.	Kiefer F., et al., "HPK1, a hematopoietic protein kinase activating the SAPK/JNK pathway," <i>EMBO J.</i> , Vol. 15, pp. 7013, 1996
62.	Kurz AK, , et al., "Osmotic regulation of the heat shock response in primary rat hepatocytes," <i>Hepatology</i> , Vol. 28, pp. 774, 1998
63.	Lee HY, et al., "All-trans-retinoic acid inhibits jun N-terminal kinase by increasing dual-specificity phosphatase activity," <i>Mol. Cell. Biol.</i> , Vol. 19, pp. 1973, 1999
64.	Lee-Kwon W, et al., "Antiapoptotic signaling by the insulin receptor in Chinese hamster ovary cells," <i>Biochemistry</i> , Vol. 37, pp. 15747, 1998
65.	Liu R. Itoh T, et al., "Activation of c-Jun N-terminal kinase by human granulocyte macrophage- colony stimulating factor in BAF3 cells," <i>Biochem. Biophys. Res. Commun.</i> , Vol. 234, pp. 611, 1997
66.	Liu Y, et al., "Role of mitogen-activated protein kinase phosphatase during the cellular response to genotoxic stress. Inhibition of c-Jun N-terminal kinase activity and AP-1-dependent gene activation," <i>J. Biol. Chem.</i> , Vol. 270, pp. 8377, 1995
67.	Liu Y, et al., "Age-related decline in mitogen-activated protein kinase activity in epidermal growth factor-stimulated rat hepatocytes," <i>J. Biol. Chem.</i> , Vol. 271, pp. 3604, 1996
68.	Ludwig S, et al., "The stress inducer arsenite activates mitogen-activated protein kinases extracellular signal-regulated kinases 1 and 2 via a MAPK kinase 6/p38- dependent pathway," <i>J. Biol. Chem.</i> , Vol. 273, pp. 1917, 1998
69.	Magi-Galluzzi C, et al., "Mitogen-activated protein kinase phosphatase 1 is overexpressed in prostate cancers and is inversely related to apoptosis," <i>Lab. Invest.</i> , Vol. 76, pp. 37, 1997
70.	Martin-Blanco E, et al., "puckered encodes a phosphatase that mediates a feedback loop regulating JNK activity during dorsal closure in Drosophila," <i>Genes Dev.</i> , Vol. 12, pp. 557, 1998
71.	Martin-Blanco E, "Regulatory control of signal transduction during morphogenesis in Drosophila," <i>Int. J. Dev. Biol.</i> , Vol. 42, pp. 363, 1998

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<b>FORM PTO-1449</b> (Rev. 2-32)	<b>U.S. Department of Commerce</b> <b>Patent and Trademark Office</b>	<b>Atty. Docket No.</b> 99,383-B1	<b>Serial No.</b> 10/803,738
<b>SUPPLEMENTAL INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)			
		<b>Applicant:</b> John W. Belmont et al.	
		<b>Filing Date:</b> March 18, 2004	<b>Group:</b> 8046

72.	Matsuda N., et al., "Proliferation and differentiation of human osteoblastic cells associated with differential activation of MAP kinases in response to epidermal growth factor, hypoxia, and mechanical stress in vitro," <i>Biochem. Biophys. Res. Commun.</i> , Vol. 249, pp. 350, 1998
73.	Matsuda S, et al., "T lymphocyte activation signals for interleukin-2 production involve activation of MKK6-p38 and MKK7-SAPK/JNK signaling pathways sensitive to cyclosporin A," <i>J. Biol. Chem.</i> , Vol. 273, pp. 12378, 1998
74.	Maulon L, et al., "T-Cell receptor signaling pathway exerts a negative control on thrombin-mediated increase in [Ca <sup>2+</sup> ] <sub>i</sub> and p38 MAPK activation in Jurkat T cells: implication of the tyrosine kinase p56Lck," <i>Blood</i> , Vol. 91, pp. 4232, 1998
75.	Maundrell K, et al., "Bcl-2 undergoes phosphorylation by c-Jun N-terminal kinase/stress-activated protein kinases in the presence of the constitutively active GTP-binding protein Rac1," <i>J. Biol. Chem.</i> , Vol. 272, pp. 25238, 1997
76.	May GH, et al., "Analysis of the interaction between c-Jun and c-Jun N-terminal kinase in vivo," <i>J. Biol. Chem.</i> , Vol. 273, pp. 33429, 1998
77.	Miralles F, et al., "UV irradiation induces the murine urokinase-type plasminogen activator gene via the c-Jun N-terminal kinase signaling pathway: requirement of an AP1 enhancer element," <i>Mol. Cell. Biol.</i> , Vol. 18, pp. 4537, 1998
78.	Miranti CK, et al., "Identification of a novel integrin signaling pathway involving the kinase Syk and the guanine nucleotide exchange factor Vav1," <i>Curr. Biol.</i> , Vol. 8, pp. 1289, 1998
79.	Moriguchi T, et al., "A novel SAPK/JNK kinase, MKK7, stimulated by TNF $\alpha$ and cellular stresses," <i>EMBO J.</i> , Vol. 16, pp. 7045, 1997
80.	Muda M, et al., "The mitogen-activated protein kinase phosphatase-3 N-terminal noncatalytic region is responsible for tight substrate binding and enzymatic specificity," <i>J. Biol. Chem.</i> , Vol. 273, pp. 9323, 1998
81.	Muda M, et al., "The dual specificity phosphatases M3/6 and MKP-3 are highly selective for inactivation of distinct mitogen-activated protein kinases," <i>J. Biol. Chem.</i> , Vol. 271, pp. 2705, 1996

<b>EXAMINER</b>	<b>DATE CONSIDERED</b>
-----------------	------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<b>FORM PTO-1449</b> (Rev. 2-32)	<b>U.S. Department of Commerce</b> <b>Patent and Trademark Office</b>	<b>Atty. Docket No.</b> 99,383-B1	<b>Serial No.</b> 10/803,738
<b>SUPPLEMENTAL INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)		<b>Applicant:</b> John W. Belmont et al.	
		<b>Filing Date:</b> March 18, 2004	<b>Group:</b> 8046

82.	Muda M., et al., "Molecular cloning and functional characterization of a novel mitogen- activated protein kinase phosphatase, MKP-4," <i>J. Biol. Chem.</i> , Vol. 272, pp. 5141, 1997
83.	Nagata Y, et al., "Activation of p38 MAP kinase pathway by erythropoietin and interleukin- 3," <i>Blood</i> , Vol. 90, pp. 929, 1997
84.	Nagata Y, et al., "Activation of JNK signaling pathway by erythropoietin, thrombopoietin, and interleukin-3," <i>Blood</i> , Vol. 89, pp. 2664, 1997
85.	Nagata Y, et al., "Activation of p38 MAP kinase and JNK but not ERK is required for erythropoietin-induced erythroid differentiation," <i>Blood</i> , Vol. 92, pp. 1859, 1998
86.	Newberry EP, et al., "Fibroblast growth factor receptor signaling activates the human interstitial collagenase promoter via the bipartite Ets-AP1 element," <i>Mol. Endocrinol.</i> , Vol. 11, pp. 1129, 1997
87.	Raingaud J, et al., "MKK3- and MKK6-regulated gene expression is mediated by the p38 mitogen-activated protein kinase signal transduction pathway," <i>Mol. Cell. Biol.</i> , Vol. 16, pp. 1247, 1996
88.	Raitano AB, et al., "The Bcr-Abl leukemia oncogene activates Jun kinase and requires Jun for transformation," <i>Proc. Natl. Acad. Sci.</i> , Vol. 92, pp. 11746, 1995
89.	Rausch O, et al, "Tyrosine 763 of the murine granulocyte colony-stimulating factor receptor mediates Ras-dependent activation of the JNK/SAPK mitogen- activated protein kinase pathway," <i>Mol. Cell. Biol.</i> , Vol. 17, pp. 1170, 1997
90.	Reunanen N, et al., "Enhancement of fibroblast cololagenase (matrix metalloproteinase- 1) gene expression by ceramide is mediated by extracellular signal-related and stress-activated protein kinase pathways," <i>J. Biol. Chem.</i> , Vol. 273, pp. 5137, 1998
91.	Rincon M, et al., "The JNK pathway regulates the In vivo deletion of immature CD4 <sup>+</sup> CD8 <sup>+</sup> thymocytes," <i>J. Exp. Med.</i> , Vol. 188, pp. 1817, 1998
92.	Roulston A, et al., "Early activation of c-Jun N-terminal kinase and p38 kinase regulate cell survival in response to tumor necrosis factor $\alpha$ ," <i>J. Biol. Chem.</i> , Vol. 273, pp. 10232, 1998

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<b>FORM PTO-1449</b> (Rev. 2-32)	<b>U.S. Department of Commerce</b> <b>Patent and Trademark Office</b>	<b>Atty. Docket No.</b> 99,383-B1	<b>Serial No.</b> 10/803,738
<b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)			
		<b>Applicant:</b> John W. Belmont et al.	
		<b>Filing Date:</b> March 18, 2004	<b>Group:</b> 8046

	93.	Ruckdeschel K, et al., "Yersinia enterocolitica promotes deactivation of macrophage mitogen- activated protein kinases extracellular signal-regulated kinase- 1/2, p38, and c-Jun NH <sub>2</sub> -terminal kinase," <i>J. Biol. Chem.</i> , Vol. 272, pp. 15920, 1997
	94.	Saxena M, et al., "Negative regulation of T cell antigen receptor signal transduction by hematopoietic tyrosine phosphatase (HePTP)," <i>J. Biol. Chem.</i> , Vol. 273, pp. 15340, 1998
	95.	Schinkmann K. Blenis J: Cloning and characterization of a human STE20-like protein kinase with unusual cofactor requirements. <i>J Biol Chem</i> 272:28695, 1997
	96.	Schliess F, et al., "Hypersmotic induction of the mitogen-activated protein kinase phosphatase MKP-1 in H411E rat hepatoma cells," <i>Arch Biochem Biophys</i> , 351:35, 1998
	97.	Scimeca JC, et al., "Essential role of calcium in the regulation of MAP kinase phosphatase- 1 expression," <i>Oncogene</i> , Vol. 15, pp. 717, 1997
	98.	Shi ZQ, et al., "The Shp-2 tyrosine phosphatase has opposite effects in mediating the activation of extracellular signal-regulated and c-Jun NH <sub>2</sub> -terminal mitogen-activated protein kinases," <i>J. Biol. Chem.</i> , Vol. 273, pp. 4904, 1998
	99.	Shieh JC, et al., "Evidence for a novel MAPKKK-independent pathway controlling the stress activated Sty1/Spc1 MAP kinase in fission yeast," <i>J. Cell. Sci.</i> , Vol. 111, pp. 2799, 1998
	100.	Shieh JC, et al., "The Win 1 mitotic regulator is a component of the fission yeast stress- activated Sty1 MAPK pathway," <i>Mol. Biol. Cell.</i> , Vol. 9, pp. 311, 1998
	101.	Skorski T, et al., "The SH3 domain contributes to BCR/ABL-dependent leukemogenesis in vivo: role in adhesion, invasion, and homing," <i>Blood</i> , Vol. 91, pp. 406, 1998
	102.	Sluss HK, et al., "Embryonic morphogenesis signaling pathway mediated by JNK targets the transcription factor JUN and the TGF- $\beta$ homologue decapentaplegic," <i>J. Cell. Biochem.</i> , Vol. 67, pp. 1, 1997
	103.	Smith A, et al., "A role for JNK/SAPK in proliferation, but not apoptosis, of IL-3-dependent cells," <i>Curr. Biol.</i> , Vol. 7, pp. 893, 1997

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No.  99,383-B1	Serial No.  10/803,738
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant:	
(Use several sheets if necessary)			
		Filing Date:	
		March 18, 2004	8046

104.	Su YC, et al., "NIK is a new Ste20-related kinase that binds NCK and MEKK1 and activates the SAPK/JNK cascade via a conserved regulatory domain," <i>EMBO J.</i> , Vol. 16, pp. 1279, 1997
105.	Sugawara T, et al., "Differential roles of ERK and p38 MAP kinase pathways in positive and negative selection of T lymphocytes," <i>Immunity</i> , Vol. 9, pp. 565, 1998
106.	Suzuki K, et al., "Cytokine-Specific Activation of Distinct Mitogen-Activated Protein Kinase Subtype Cascades in Human Neutrophils Stimulated by Granulocyte Colony-Stimulating Factor, Granulocyte-Macrophage Colony-Stimulating Factor, and Tumor Necrosis Factor- $\alpha$ ," <i>Blood</i> , Vol. 93, pp. 341, 1999
107.	Takahashi K, et al., "Direct binding between two PDZ domain proteins canoe and ZO-1 and their roles in regulation of the jun N-terminal kinase pathway in drosophila morphogenesis," <i>Mech. Dev.</i> , Vol. 78, pp. 97, 1998
108.	Takekawa M, et al., "Protein phosphatase 2C $\alpha$ inhibits the human stress-responsive p38 and JNK MAPK pathways," <i>EMBO J.</i> , Vol. 17, pp. 4744, 1998
109.	Takekawa M, et al., "A human homolog of the yeast Ssk2/Ssk22 MAP kinase kinase kinases, TMK1, mediates stress-induced activation of the p38 and JNK pathways," <i>EMBO J.</i> Vol. 16, pp. 4973, 1997
110.	Takenaka K, et al., "Activation of the protein kinase p38 in the spindle assembly checkpoint and mitotic arrest," <i>Science</i> , Vol. 280, pp. 599, 1998
111.	Terada K, et al., "Ras-dependent activation of c-Jun N-terminal kinase/stress-activated protein kinase in response to interleukin-3 stimulation in hematopoietic BaF3 cells," <i>J. Biol. Chem.</i> , Vol. 272, pp. 4544, 1997
112.	Teramoto H, et al., "Tyrosine phosphorylation of the vav proto-oncogene product links FcepsilonRI to the Rac1-JNK pathway," <i>J. Biol. Chem.</i> , Vol. 272, pp. 10751, 1997
113.	Thuerlauf DJ, et al., "p38 Mitogen-activated protein kinase mediates the transcriptional induction of the atrial natriuretic factor gene through a serum response element A potential role for the transcription factor ATF6," <i>J. Biol. Chem.</i> , Vol. 273, pp. 20636, 1998
114.	Tibbles LA, et al., "MLK-3 activates the SAPK/JNK and p38/RK pathways via SEK1 and MKK3/6," <i>EMBO J.</i> , Vol. 15, pp. 7026, 1996

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

<b>FORM PTO-1449</b> (Rev. 2-32)	<b>U.S. Department of Commerce</b> <b>Patent and Trademark Office</b>	<b>Atty. Docket No.</b> 99,383-B1	<b>Serial No.</b> 10/803,738
<b>SUPPLEMENTAL INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)		<b>Applicant:</b> John W. Belmont et al.	
		<b>Filing Date:</b> March 18, 2004	<b>Group:</b> 8046

	115.	Tobiune K, "Characterization of mouse apoptosis signal-regulating kinase 1," Vol. 65, pp. 42, 1998
	116.	Tournier C, et al., "Mitogen-activated protein kinase kinase 7 is an activator of the c-Jun NH <sub>2</sub> -terminal kinase," <i>Proc. Natl. Acad. Sci.</i> , Vol. 94, pp. 7337, 1997
	117.	Tournier C, et al., "Mediation by arachidonic acid metabolites of the H <sub>2</sub> O <sub>2</sub> -induced stimulation of mitogen-activated protein kinases (extracellular-signal-regulated kinase and c-Jun NH <sub>2</sub> -terminal kinase)," <i>Eur. J. Biochem.</i> , Vol. 244, pp. 587, 1997
	118.	Toyoshima F, et al., "Fas induces cytoplasmic apoptotic responses and activation of the MKK7- JNK/SAPK and MKK6-p38 pathways independent of CPP32-like proteases," <i>J. Cell. Biol.</i> , Vol. 139, pp. 1005, 1997
	119.	Wang JF, et al., "Signal transduction in human hematopoietic cells by vascular endothelial growth factor related protein, a novel ligand for the FLT4 receptor," <i>Blood</i> , Vol. 90, pp. 3507, 1997
	120.	Wang W, et al., "Activation of the hematopoietic progenitor kinase-1 (HPK1)-dependent, stress-activated c-Jun N-terminal kinase (JNK) pathway by transforming growth factor $\beta$ (TGF- $\beta$ )-activated kinase (TAK1), a kinase mediator of TGF $\beta$ Signal Transduction," <i>J. Biol. Chem.</i> , Vol. 272, pp. 22771, 1997
	121.	Wang XS, et al., "Molecular cloning and characterization of a novel p38 mitogen-activated protein kinase," <i>J. Biol. Chem.</i> , Vol. 272, pp. 23668, 1997
	122.	Wang Y, et al., "Cardiac hypertrophy induced by mitogen-activated protein kinase 7, a specific activator for c-Jun NH <sub>2</sub> -terminal kinase in ventricular muscle cells," <i>J. Biol. Chem.</i> , Vol. 273, pp. 5423, 1998
	123.	Werlen G, et al., "Calcineurin preferentially synergizes with PKC- $\theta$ to activate JNK and IL-2 promoter in T lymphocytes," <i>EMBO J.</i> , Vol. 17, pp. 3101, 1998
	124.	Westermarck J, et al., "Enhancement of fibroblast collagenase-1 (MMP-1) gene expression by tumor promoter okadaic acid is mediated by stress-activated protein kinases Jun N-terminal kinase and p38," <i>Matrix Biol.</i> , Vol. 17, pp. 547, 1998
	125.	Whitmarsh AJ, et al., "A mammalian scaffold complex that selectively mediates MAP kinase activation," <i>Science</i> , Vol. 281, pp. 1671, 1998

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449 (Rev. 2-32)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 99,383-B1	Serial No. 10/803,738
SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)		Applicant: John W. Belmont et al.	
		Filing Date: March 18, 2004	Group: 8046

	126.	Whitmarsh AJ, et al., "Integration of MAP kinase signal transduction pathways at the serum response element," <i>Science</i> , Vol. 269, pp. 403, 1995
	127.	Whitmarsh AJ, et al, "Role of p38 and JNK mitogen-activated protein kinases in the activation of ternary complex factors," <i>Mol. Cell. Biol.</i> , Vol. 17, pp. 2360, 1997
	128.	Wilkinson MG, et al., "The atf1 transcription factor is a target for the Sty1 stress-activated MAP kinase pathway in fission yeast," <i>Genes &amp; Dev.</i> , Vol. 10, pp. 2289, 1996
	129.	Winter C, et al., "MAP kinase phosphatase 1 is expressed and enhanced by FK506 in surviving mamillary, but not degenerating nigral neurons following axotomy," <i>Brain Res.</i> , Vol. 801, pp. 198, 1998
	130.	Wisdom R, et al., "c-Jun regulates cell cycle progression and apoptosis by distinct mechanisms," <i>EMBO J.</i> , Vol. 18, pp. 188, 1999
	131.	Yang DD, et al., "Differentiation of CD4 <sup>+</sup> T cells to Th1 cells requires MAP kinase JNK2," <i>Immunity</i> , Vol. 9, pp. 575, 1998
	132.	Yang DD, et al., "Absence of excitotoxicity- induced apoptosis in the hippocampus of mice lacking the Jnk3 gene," <i>Nature</i> , Vol. 389, pp. 865, 1997
	133.	Yang J, et al., "Molecular cloning and characterization of a human protein kinase that specifically activates c-Jun N-terminal kinase," <i>Gene</i> , Vol. 212, pp. 95, 1998
	134.	Yao Z, et al., "Activation of stress-activated protein kinases/c-Jun N-terminal protein kinases (SAPKs/JNKs) by a novel mitogen-activated protein kinase kinase," <i>J. Biol. Chem.</i> , Vol. 272, pp. 32378, 1997
	135.	Yeh WC, et al., "Early lethality, functional NF-kappaB activation, and increased sensitivity to TNF-induced cell death in TRAF2-deficient mice," <i>Immunity</i> , Vol. 7, pp. 715, 1997
	136.	Yuasa T, et al., "Tumor necrosis factor signaling to stress-activated protein kinase (SAPK)/Jun NH2-terminal kinase (JNK) and p38. Germinal center kinase couples TRAF2 to mitogen-activated protein kinase/ERK kinase kinase 1 and SAPK while receptor interacting protein associates with a mitogen-activated protein kinase kinase upstream of MKK6 and p38," <i>J. Biol. Chem.</i> , Vol. 273, pp. 22681, 1998

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449  
(Rev. 2-32)

U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

99,383-B1

Serial No.

10/803,738

**SUPPLEMENTAL INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

**Applicant:**

John W. Belmont et al.

**Filing Date:**

March 18, 2004

**Group:**

8046

137.	Zanke BW, et al., "Mammalian mitogen-activated protein kinase pathways are regulated through formation of specific kinase-activator complexes," <i>J. Biol. Chem.</i> , Vol. 271, pp. 29876, 1996
138.	Zechner D, et al., "MKK6 activates myocardial cell NF-kappaB and inhibits apoptosis in a p38 mitogen-activated protein kinase-dependent manner," <i>J. Biol. Chem.</i> , Vol. 273, pp. 8232, 1998
139.	Zechner D, et al., "A role for the p38 mitogen-activated protein kinase pathway in myocardial cell growth, sarcomeric organization, and cardiac-specific gene expression," <i>J. Cell. Biol.</i> , Vol. 139, pp. 115, 1997

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.